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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,932	12/29/2000	Ulrich Steegmueller	P1999,0012US	7981

7590 06/17/2003  
EPPING, HERMANN & FISCHER  
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MUNICH, D-80339  
GERMANY

EXAMINER

NGUYEN, TU T

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/751,932

Applicant(s)

STEEGMUELLER ET AL.

Examiner

Tu T Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-18 and 22 is/are rejected.
- 7) ☒ Claim(s) 11-13 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7, 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Detailed Office Action

*Specification*

The disclosure is objected to because of the following informalities:

In the specification, page 6, lines 28-29, "photodetector 22" should be changed to "photodetector 23" to match with the fig 2.

*Claim Rejections - 35 U.S.C. § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10,14-18,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leonard (4,691,101) in view of Moll et al (DE 43 18 386).

With respect to claims 1,15, Leonard discloses an optical encoder. The encoder comprises: a raster (code wheel, fig 6a), light detector means AB (fig 6a), evaluation means (fig 9).

Leonard does not disclose using a set of three light detecting elements. Leonard discloses that the number of detectors could be modified (column 6, lines 15-26). Moll discloses using three detectors 20,21,22 (fig 7) for encoding the data. It would have been obvious to modify Leonard's system with Moll to use three detectors for the encoding to save the system's cost.

With respect to claims 2,4, 8-9,17, Leonard discloses all the claimed limitations in figs 7a and 7b.

With respect to claims 3,16, the claimed limitation would have been obvious if Leonard's system uses three detectors as the discussion above.

With respect to claims 5-7, the claimed light emitting means would have been known. It would have been obvious a design choice to modify Leonard's system with the known light emitting means to facilitate the encoding. The modification involves only routine skill in the art.

With respect to claims 10,18, Leonard discloses an adder 17 (fig 9) and comparators 25. Leonard does not explicitly disclose a divider. However, Leonard discloses using a preamp 41 to control the output signal which performs the same function as the claimed divider. Further, Moll discloses a divider 25 (fig 8). It would have been obvious to modify Leonard's system with Moll's divider to control the output signal to make the system more accurate. Leonard does not disclose the arrangement as claimed. However, It would have been obvious to modify Leonard's evaluating means with different arrangements for different requirements.

With respect to claims 14,22, the skill artisan would have been motivated to build the light detection means and the evaluating means on a single substrate to make the system more compact and to reduce the system's noise.

***Allowable Subject Matter***

Claims 11-13,19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior arts of record does not disclose the input of the adder as claimed in claims 11,19 in combination with the base claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**Tu T. Nguyen  
Primary Examiner  
Group Art Unit 2877**

6/14/03